

Application No. 10/791,042

Response to Non-Final Office Action of June 25, 2007

Amendments to the Drawings:

Replacement Sheets 4, 7, and 10 and Annotated Sheets 4, 7, and 10 (dated September 2007 in sheet headers) are submitted herewith.

Sheet 4 (Fig. 4) is amended to show touchscreen 23 on LCD 22, touchpad 24, and touchscreen controller 51 which find support in Fig. 4 of parent application 09/928,294.

Sheet 7 (Fig. 7) is replaced by Fig. 11 from parent application 09/928,294 and amended to provide a reference code Y₃ for the horizontal coordinate on which finger 12 touches touchscreen 23.

Sheet 10 (Fig. 10) is amended to include coordinates data in memory map 53 that finds support in Fig. 3 (paragraph 0038), Fig. 5 (paragraph 0060), Fig. 6 (paragraph 0064), and amended Fig. 7 (paragraph 0096 of parent application 09/928,294).

Conversion of 2D touchscreen coordinates to 3D simulated spatial coordinates finds support in paragraph 0125 second sentence of parent application 09/928,294.

No new matter is introduced by these amendments.

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REMARKS / ARGUMENTS

Double Patenting

In the Office Action mailed June 25, 2007, claims 1–21 were provisionally rejected for obviousness-type double patenting over conflicting claims in applicant's nine copending applications 10/668940, 10/782043, 10/794631, 10/803385, 10/875664, 10/987733, 11/004217, 11/039768, and 11/039769. Claims 1–21 have been canceled in the present application and therefore the issue of whether they may have been in conflict with any claims in the nine copending applications is now moot.

Claims 22–35 in the present application 10/791,042 are limited to autostereoscopic and touchscreen displays that are not both claimed in any of the nine applications:

10/668940 Autostereoscopic displays are not claimed.

10/782043 Touchscreen displays are not claimed.

10/794631 Autostereoscopic displays are not claimed.

10/803385 Autostereoscopic displays are not claimed.

10/875664 Autostereoscopic displays are not claimed.

10/987733 Autostereoscopic displays are not claimed.

11/004217 Autostereoscopic displays are not claimed.

11/039768 Autostereoscopic displays are not claimed.

11/039769 Autostereoscopic displays are not claimed.

A clear line of demarcation between the applications will be maintained.

The Office Action mailed June 25, 2007 questioned why applicant did not present claims corresponding to those of the instant application during prosecution of the application which matured into a patent (US 6,921,336 or 6,966,837). The present pending claims 22–35 are directed to a different invention than the inventions claimed in those earlier applications, and therefore the issue is moot.

Amendments to Drawings

Replacement Sheet 4 (Fig. 4) is submitted herewith to show touchscreen 23 on LCD 22 that was fully disclosed with reference to Fig. 4 in parent application 09/928,294, but was mistakenly omitted in Fig. 4 of the present application.

Replacement Sheet 7 (Fig. 7) is submitted herewith to replace the previous Fig. 7 and to provide a reference code Y₃ for the horizontal coordinate where finger 12 touches touchscreen 23. Replacement Fig. 7 is from Fig. 11 in parent application 09/928,294.

Replacement Sheet 10 (Fig. 10) is submitted herewith to include coordinates data in memory map 53. This amendment finds support in Fig. 3 (paragraph 0038), Fig. 5 (paragraph 0060), Fig. 6 (paragraph 0064), and amended Fig. 7 (paragraph 0096 of parent application 09/928,294). Conversion of 2D touchscreen coordinates to 3D simulated spatial coordinates finds support in paragraph 0125 second sentence of parent application 09/928,294.

Corresponding amendments to the Specification have been submitted herewith. No new matter is introduced by these amendments.

Applicant respectfully requests that Replacement Sheets 4, 7, and 10 be entered.

Claim Rejections - 35 USC §103

Applicant has canceled prior claims 1–21 without disclaimer. Claims 22–35 are submitted to more clearly define the invention. Claims 22–35 are now pending.

In response to the Office Action mailed June 25, 2007, applicant herewith submits new narrower independent claims 22, 31, and 33 that (like previously examined dependent claims 3, 11, and 20) claim a game system that generates polygon images of 3D objects rendered from two variable viewpoints for viewing on a stereoscopic display and controlled by a touch sensitive direction control device.

In the Office Action mailed June 25, 2007, claims 1–21 were rejected under 35 U.S.C 103(a) as unpatentable over the combined teachings of Yokoi (US 5,682,171), Nishiumi et al. (US 5,903,257), and Sasaki (US 5,577,960).

Lacking in the proposed combination of Yokoi, Nishiumi, and Sasaki when applied to applicant's claim 22 are (e) a parallax barrier, and (d)(l) an autostereoscopic discrete display device that displays interlaced images, and other limitations discussed below. Jones et al. (US 2004/0012671) teaches a parallax barrier and autostereoscopic discrete display device that displays interlaced images.

The proposed combination of Yokoi, Nishiumi, Sasaki, and Jones, when applied to applicant's claim 22, teaches a portable game system that (a) generates polygon images of 3D objects, (b)(c) renders the polygons from two variable viewpoints for (d)(l) viewing as left and right interlaced images on a stereoscopic display device, (e) a parallax barrier, a (f)(h) touch sensitive direction control device, and (k) a processor for generating 3D motion of a player object.

Lacking in the proposed combination of Yokoi, Nishiumi, Sasaki, and Jones are a (f) touch sensitive transparent panel (touchscreen) mounted on the autostereoscopic discrete display device that displays the interlaced images through the touchscreen, and (g)(i) a data memory storing 2-dimensional coordinates of touched locations and corresponding 2-dimensional coordinates of display locations which include at least one value that is different than the corresponding touched locations.

In applicant's claim 22, a distinction is made between the touched (input) 2D coordinates and the display (output) 2D coordinates because some of the display coordinates are different than the corresponding touched coordinates as a result of the dual viewpoints illustrated in Fig. 3. Even if the display coordinates for a spot on hand 37 at $X_2 Y_3$ in Fig. 7 from the left eye viewpoint happen to be equal to the touched coordinates $X_2 Y_3$ of that spot at a given point in time, the display coordinates of that spot on hand 37 from the right eye viewpoint will usually be different than the coordinates of the same spot at the same time from the corresponding left eye viewpoint. This limitation is expressed in claim 22 element (i).

Claim 22 element (i) - 2D touched coordinates having different values than 2D display coordinates - is neither taught nor suggested in the proposed combination.

Claim 22 element (j) - converting 2D touched locations to 3D spatial coordinates - is neither taught nor suggested in the proposed combination.

The proposed combination of Yokoi, Nishiumi, Sasaki, and Jones does not show, describe, or remotely suggest the claim limitations required by applicant's claim 22 elements (i) and (j):

In order to establish a *prima facie* case of obviousness, all of the claim limitations must be taught or suggested by the prior art. The proposed combination of Yokoi, Nishiumi, Sasaki, and Jones fails to teach or suggest all of the claim limitations. Therefore, a *prima facie* case of obviousness has not been established.

Arguments directed to pending claim 22 may also be directed to independent claims 31 and 33, and claims dependent thereon.

Applicant's dependent claims are dependent on pending independent claims that are believed to be allowable, and therefore the reasons given in the recent Office Action for rejection of the dependent claims are moot.

For the above reasons, applicant submits that the present pending claims define an invention that was novel, non-obvious, and a significant advance over the prior art on his priority date. A favorable decision is respectfully requested.

Applicant requests that Fig. 1 be the representative drawing.

Respectfully submitted,

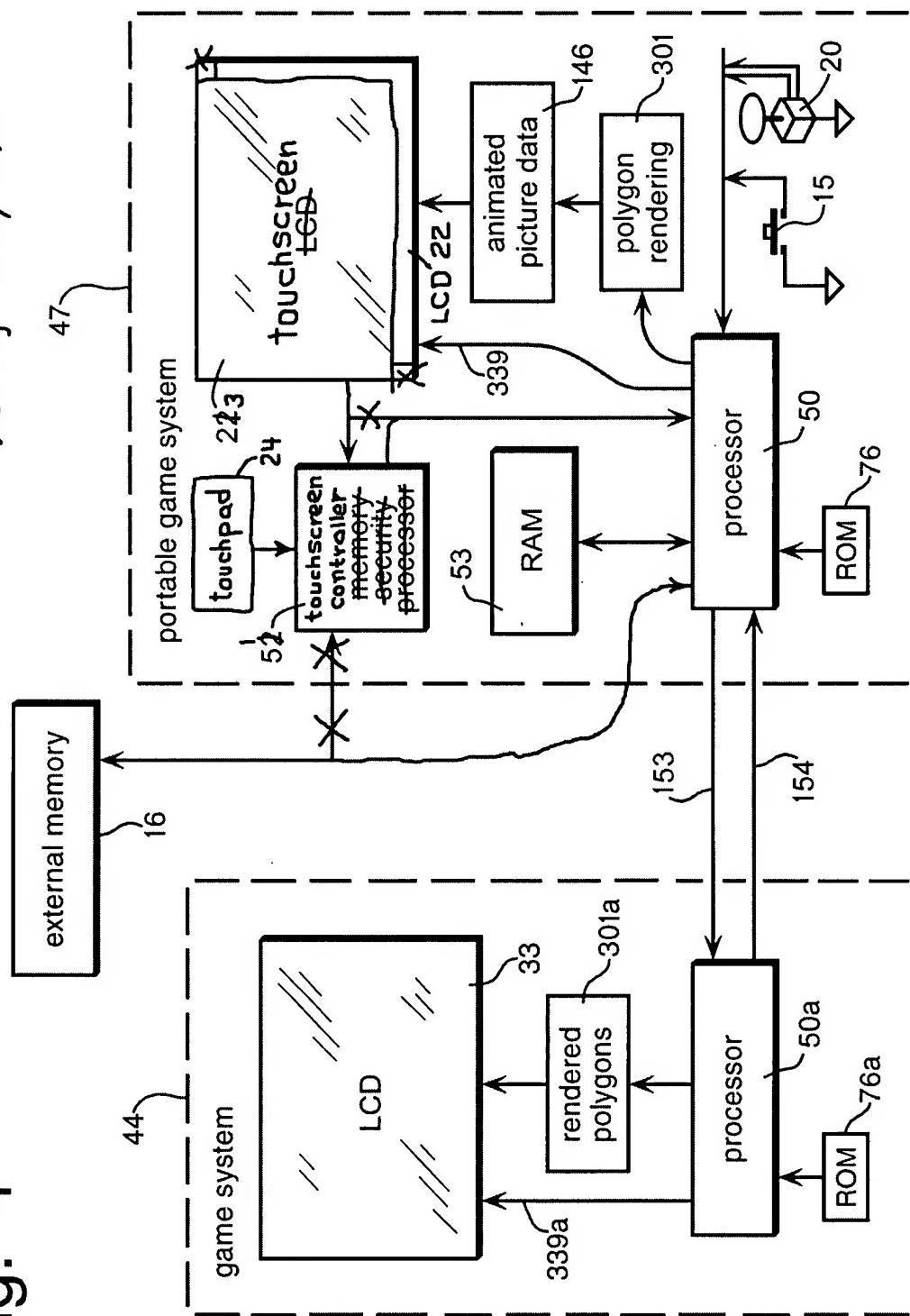
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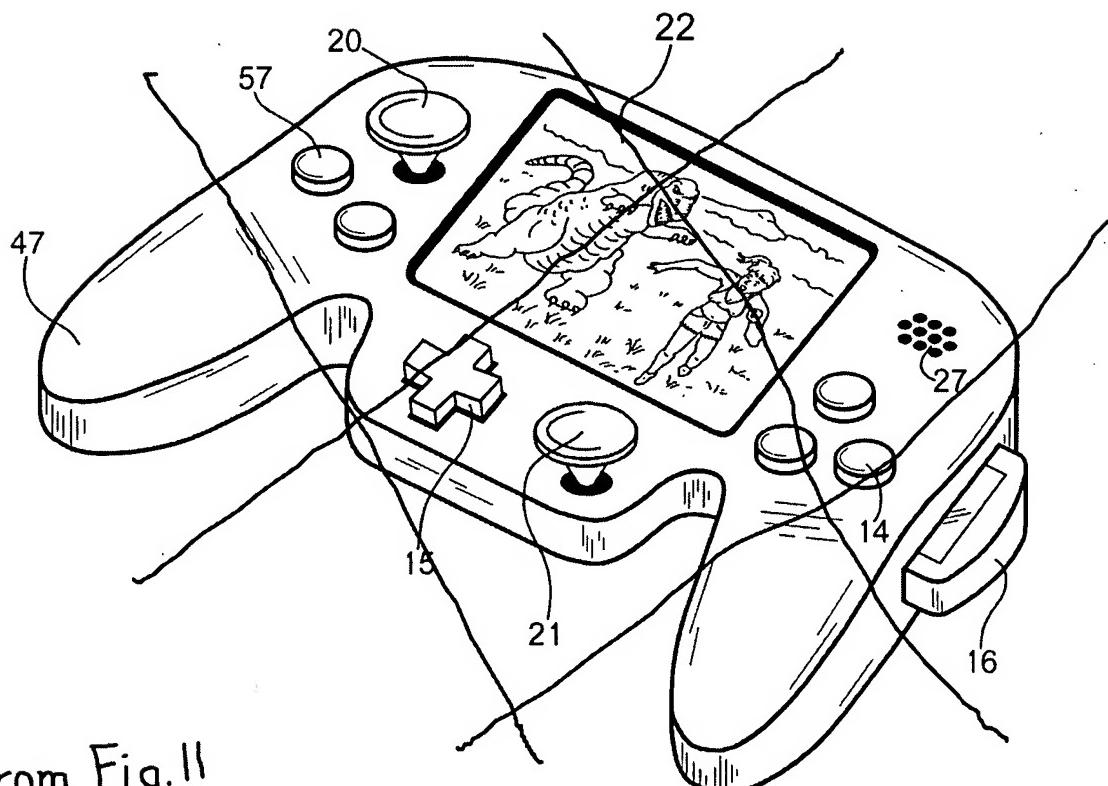
amended material
from Fig. 4 in 09/928,294

Fig. 4



Annotated Sheet

7/14



from Fig. 11
in 09/928,294

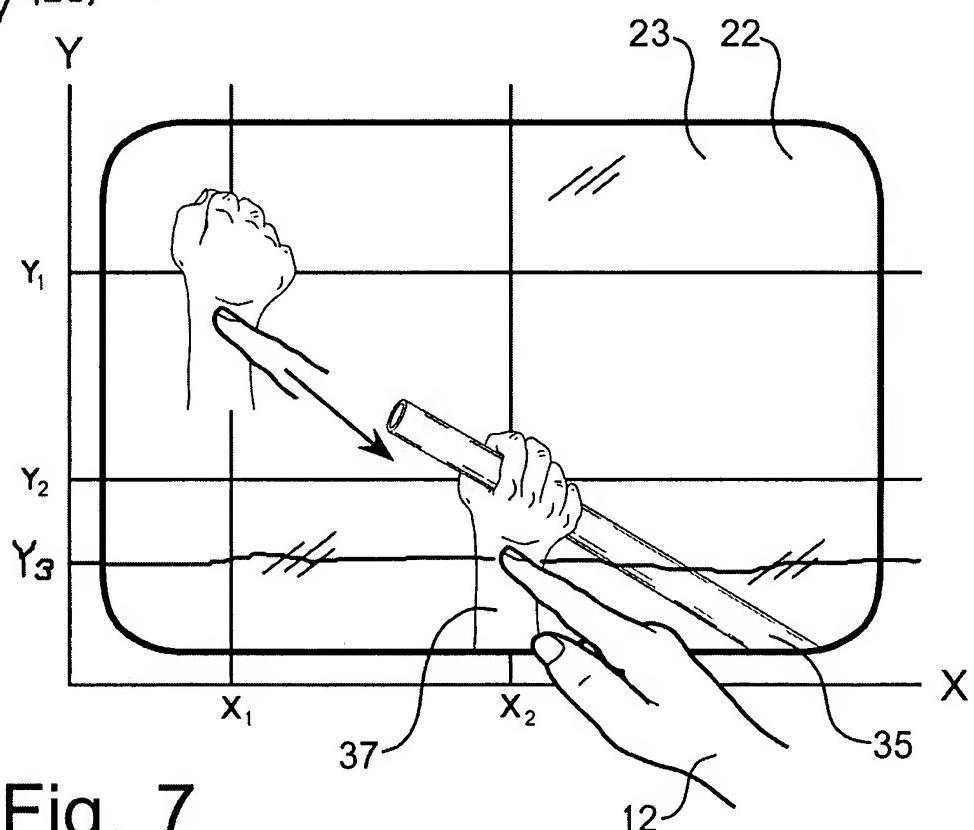


Fig. 7

Annotated Sheet

10 / 14

Fig. 10

RAM in portable system	53
program for converting finger movement 2D touchscreen coordinates to 3D location coordinates	
program for generating image of 3D world	
program for determining viewpoint and camera angle	
program for generating movement of a 3D character in a 3D game world	
program for superimposing a 3D object picture on a 3D background	
program for animating a character	
program for displaying maps and other non-animated pictures	
data for simulated 3D world	
data for object in simulated 3D world	
data for animated character in simulated 3D world	
data for character descriptions (polygons, textures, etc)	
data for terrain descriptions (polygons, textures, etc)	
data for maps, word menus, etc.	
data for viewpoints and camera angles in 3D game world	
stereoscopic pixel data	address
data for 2D touchscreen coordinates	
data for 3D spatial coordinates of objects	